REMARKS

Reconsideration is respectfully requested in light of the amendments above and the remarks that follow. Applicant wishes to express appreciation to Examiner Aeder for the courtesies extended to Applicant's representative, Lars Genieser, during a telephonic interview on December 30, 2009.

With respect to the Examiner's comments on page 2 of the Office Action regarding the correction of the spelling of inventor Sawyers's name in the records of the U.S. Patent and Trademark Office (USPTO), Applicant notes that the Transmittal Letter (PTO-1390), Application Data Sheet, and Declaration of Inventorship submitted on June 16, 2006 with the request to enter the U.S. National Stage for the above-identified application, as well as the publication WO 2005/0660661 of PCT international application PCT/US2004/042221, from which the above-identified application derives, correctly listed inventor Sawyers's name as spelled "Charles L. Sawyers". Therefore, applicant submits that the incorrect spelling of inventor Sawyers's last name as "Sawyer" (without the terminal "s") on the Notice of Acceptance of Application and the Filing Receipt mailed by the USPTO on April 19, 2007 and in the electronic PAIR records represents an internal error on the part of the USPTO. As such, Applicant submits that the fee and documents associated with a request for correction of inventorship under 37 CFR 1.48 need not be submitted. Rather, Applicant respectfully requests that the USPTO correct its internal records to correctly render the spelling of inventor Sawyers's name as "Charles L. Sawyers" (with the last name having the terminal "s") and that a corrected Filing Receipt be timely issued.

Paragraph [0001] has been amended to revise the statement of government support and to include text presenting the priority claimed for the above-identified application. Paragraph [00025] has been amended to remove the Internet hyperlink. Applicant submits that this overcomes the Examiner's objection to the specification made in the first paragraph on page 3 of the Office Action.

Claims 1, 5-10, and 16-28 are pending. Claims 6, 8, 10, and 16-19 are withdrawn. Claims 11-15 are canceled. Claims 1, 5-9, 16, 20, 22, and 24 are amended by this paper. Claims 25-28 are new. Support for amended claims 1, 5-9, 16, 20, 22, and 24 and new claims 25-28 is found, for example, in paragraphs [0005], [0007], [00010]-[00014], [00017], [00019], [00031], [00036], [00041], [00046], and [00051] of the specification as filed.

Claim 5 has been amended to recite the element of "a hormone-sensitive mammalian cancer cell", which provides antecedent basis for subsequent references to "said hormone-sensitive mammalian cancer cell" in claims 5, 7, and 9. Claim 20 has been amended to remove the phrase "such as". Therefore, claims 5, 7, 9, and 20 as amended comply with 35 U.S.C. 112, second paragraph. Applicant respectfully requests that the rejection (page 3, Office Action) of claims 5, 7, 9, and 20 under 35 U.S.C. 112, second paragraph be withdrawn.

With regard to the Examiner's rejection of claim 1 in the second paragraph on page 4 of the Office Action, Applicant submits that the contacting of a compound with a mammalian prostate cancer cell that expresses exogenous wild type androgen receptor polynucleotide and exhibits androgen-independent growth, and the comparison of physiological characteristics of the resultant treated prostate cancer cell with those of a control prostate cancer cell is supported by the written description of the specification as filed. For example, paragraph [0010] of the written description indicates that the disclosure "includes assays for examining the effects of therapeutic compounds on mammalian cells such as androgen independent prostate cancer cells." Such assays are then described in the subsequent paragraphs [00011]-[00015]. Furthermore, paragraph [0005] indicates that the terms "androgen independent" and "hormone refractory (HR)" are used interchangeably in the specification. Paragraphs [00016]-[00018] describe methods of treating a hormone refractory prostate cancer in a patient, further clarifying that the assay methods can be applied with androgen independent, that is, hormone refractory, cells. Paragraphs [00035]-[00043] provide further detail on the development of the assay with hormone refractory (HR), that is, androgen independent, cells. Therefore, Applicant submits that amended claim 1 complies with the written description requirement of 35 U.S.C. 112, first

paragraph. Applicant respectfully requests that this rejection of claim 1 under 35 U.S.C. 112, first paragraph be withdrawn.

Applicant has amended claim 1 to eliminate the text "said compound decreases the biological function of androgen receptors by ..." and "said compound inhibits the growth of hormone refractory prostate cancer cells." Amended claim 1 and claims 20-24 dependent therefrom are not limited by a genus of compounds to which the Examiner refers in the paragraph bridging pages 4 and 5 and subsequent paragraphs of the Office Action. Therefore, Applicant submits that amended claims 1 and 20-24 comply with the written description requirement of 35 U.S.C. 112, first paragraph. Applicant respectfully requests that the rejection of claims 1 and 20-24 under 35 U.S.C. 112, first paragraph be withdrawn.

For the following reasons, Applicant submits that amended claims 5, 7, and 9 are novel with respect to the references Burnstein et al., Molecular and Cellular Endocrinology, v. 115 (1995) pp. 177-186 (herein, "Burnstein"), Cinar et al., Cancer Research, v. 61 (October 2001) pp. 7310-7317 (herein, "Cinar"), Szelei et al., Endocrinology, v. 138(4) (1997) pp. 1406-1412 (herein, "Szelei"), and Raffo et al., Cancer Research, v. 55 (October 1995) pp. 4438-4445 (herein, "Raffo"), cited by the Examiner on pages 7-11 of the Office Action.

Burnstein does not disclose that an increased level of mRNA that encodes a nuclear receptor protein in a selected mammalian cancer cell is at least two fold higher than the endogenous level of the mRNA in a hormone-sensitive mammalian cancer cell, as is required by instant claims 5, 7, and 9. Furthermore, Burnstein is silent with respect to the dependence of growth of the cells on a nuclear receptor ligand, and does not disclose that the growth of said selected mammalian cancer cell is nuclear receptor ligand-independent, as is required by instant claims 5, 7, and 9. Indeed, Burnstein's method of transfecting cells with a human androgen receptor (hAR) nucleotide using the calcium phosphate method leads to cells that only transiently express (see, Burnstein, p.179, right column), and do not stably express, the transfected nucleotide. Amended claims 5, 7, and 9 require stable expression. Cells such as Burnstein's that only transiently express hAR nucleotide are not suited for assessing the nuclear receptor ligand independence of cell proliferation. The Burnstein paper emphasizes that in the

transfected cells, downregulation of androgen receptor (AR) mRNA occurs upon exposure of the cells to synthetic androgen (see, Burnstein, p. 177, Abstract, and p. 179, right column). Furthermore, downregulation of androgen receptor (AR) mRNA occurs upon exposure of the cells to dexamethasone, a glucocorticoid (see, Burnstein, p. 177, Abstract, and p. 183, left column). Burnstein's observation of a mechanism of negative feedback suggests that it should not be possible to engineer cells that express an increased level of nuclear receptor mRNA. By contrast, cells that express an increased level of nuclear receptor mRNA (for example, androgen receptor mRNA) are presented in the instant specification and required by instant claims 5, 7, and 9. Because Burnstein does not teach all limitations of instant claims 5, 7, and 9, Burnstein does not anticipate these claims. Applicant respectfully requests that the rejection of claims 5, 7, and 9 under 35 U.S.C. 102(b) over Burnstein be withdrawn.

Cinar does not disclose the use of nuclear receptor ligand-independent mammalian cancer cells that express an exogenous polynucleotide, as is required by instant claims 5, 7, and 9. For example, Fig. 4 of Cinar shows that the C-18 transfected cells exhibit an increased fraction of cells in the S, G2, and M phases (suggestive of proliferation) upon exposure to the synthetic androgen R1881, indicating that the growth of the C-18 cells is androgen dependent (and, therefore, nuclear receptor ligand dependent). The legend of Fig. 7 of Cinar points out that "the introduction of hAR wt exhibited ... enhanced androgen responsiveness." Because Cinar does not teach the use of androgen-independent mammalian cancer cells, Cinar does not teach all limitations of claims 5, 7, and 9 as amended, and does not anticipate these claims. Applicant respectfully requests that the rejection of claims 5, 7, and 9 under 35 U.S.C. 102(b) over Cinar be withdrawn.

Szelei does not disclose the use of nuclear receptor ligand-independent mammalian cancer cells that express an exogenous polynucleotide, as is required by instant claims 5, 7, and 9. Figure 5 of Szelei shows that as the concentration of the synthetic androgen R1881 is increased, the proliferation of MCF7-AR1 cells decreases. That is, Szelei shows that growth of the MCF7-AR1 cells is suppressed by androgen, so that the growth of the cells is not androgen independent (and, hence, not nuclear receptor ligand independent). Because Szelei does not

disclose the use of nuclear receptor ligand-independent mammalian cancer cells, Szelei does not teach all limitations of claims 5, 7, and 9 as amended, and does not anticipate these claims. Applicant respectfully requests that the rejection of claims 5, 7, and 9 under 35 U.S.C. 102(b) over Szelei be withdrawn.

Raffo does not disclose examining the physiological effect of a compound on a selected mammalian cancer cell that stably expresses an exogenous wild type polynucleotide that encodes a nuclear receptor protein or polypeptide, as required by claim 5. The bcl-2 protein disclosed in Raffo is not a nuclear receptor protein or polypeptide. Therefore, Raffo does not teach all limitations of instant claims 5, 7, and 9 and does not anticipate these claims. Applicant respectfully requests that the rejection of claims 5, 7, and 9 under 35 U.S.C. 102(b) over Raffo be withdrawn.

Applicant submits that, for the reasons given above, all pending claims not withdrawn, claims 1, 5, 7, 9, and 20-28, are patentable and that, as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is hereby invited to telephone the undersigned at the number provided.

Applicant respectfully requests that a Notice of Allowance of all pending claims not withdrawn, claims 1, 5, 7, 9, and 20-28, be timely issued in this case.

Respectfully submitted,

Date: February 9, 2010

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DC2/1077086